

WHAT IS CLAIMED IS:

1. A handheld device comprising:
  - a display having a viewable surface and operable to generate an image indicating a currently controlled remote device;
  - 5 a gesture database maintaining a plurality of remote command gestures, each remote command gesture defined by a motion of the device with respect to a first position of the handheld device;
  - a gesture mapping database comprising a mapping of each of the remote command gestures to an associated command for controlling operation of the remote  
10 device;
  - a motion detection module operable to detect motion of the handheld device within three dimensions and to identify components of the motion in relation to the viewable surface;
  - a control module operable to track movement of the handheld device using the  
15 motion detection module, to compare the tracked movement against the remote command gestures to determine a matching gesture, and to identify the one of the commands corresponding to the matching gesture; and
  - a wireless interface operable to transmit the identified command to a remote receiver for delivery to the remote device.  
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2. The handheld device of Claim 1, wherein the remote receiver comprises a wireless interface of the remote device.
3. The handheld device of Claim 1, wherein the remote receiver  
25 comprises an element of a public wireless telephone network.
4. The handheld device of Claim 1, wherein the remote device comprises audio/visual equipment.
- 30 5. The handheld device of Claim 4, wherein the identified command controls output of the audio/visual equipment.

6. The handheld device of Claim 1, wherein the wireless interface is further operable to transmit the matching gesture to the remote receiver for delivery to the remote device.

- 5           7. The handheld device of Claim 1, further comprising:  
          a first accelerometer operable to detect acceleration along a first axis;  
          a second accelerometer operable to detect acceleration along a second axis, the  
second axis perpendicular to the first axis; and  
          a third accelerometer operable to detect acceleration along a third axis, the  
10 third axis perpendicular to the first axis and perpendicular to the second axis; and  
wherein:  
          the gesture database further defines each of the remote command gestures  
using a sequence of accelerations;  
          the motion detection module is further operable to detect motion of the device  
15 using accelerations measured by the first accelerometer, the second accelerometer,  
and the third accelerometer; and  
          the control module is further operable to match the accelerations measured by  
the motion detection module against gesture definitions in the gesture database to  
identify particular ones of the remote command gestures.

8. A method for remotely controlling devices comprising:
- generating, on a viewable surface of a handheld device, an image indicating a currently controlled remote device;
- maintaining a gesture database comprising a plurality of remote command gestures, each remote command gesture defined by a motion of the device with respect to a first position of the handheld device;
- maintaining a gesture mapping database comprising a mapping of each of the remote command gestures to an associated command for controlling operation of the remote device;
- tracking movement of the handheld device in relation to the viewable surface;
- comparing the tracked movement against the remote command gestures to determine a matching gesture;
- identifying the one of the commands corresponding to the matching gesture;
- and
- transmitting the identified command to a remote receiver for delivery to the remote device.
9. The method of Claim 8, wherein the remote receiver comprises a wireless interface of the remote device.
10. The method of Claim 8, wherein the remote receiver comprises an element of a public wireless telephone network.
11. The method of Claim 8, wherein the remote device comprises audio/visual equipment.
12. The method of Claim 11, wherein the identified command controls output of the audio/visual equipment.

13. The method of Claim 8, wherein the gesture database further defines each of the remote command gestures using a sequence of accelerations; the method further comprising:

detecting acceleration of the handheld device along a first axis;

5 detecting acceleration of the handheld device along a second axis, the second axis perpendicular to the first axis; and

detecting acceleration of the handheld device along a third axis, the third axis perpendicular to the first axis and perpendicular to the second axis;

10 detecting motion of the device using accelerations measured by the first accelerometer, the second accelerometer, and the third accelerometer; and

matching the accelerations against gesture definitions in the gesture database to identify potential indicated ones of the remote command gestures.

14. Logic for controlling a handheld device, the logic embodied in a computer readable medium and operable when executed to perform the steps of:

generating, on a viewable surface of a handheld device, an image indicating a currently controlled remote device;

5 maintaining a gesture database comprising a plurality of remote command gestures, each remote command gesture defined by a motion of the device with respect to a first position of the handheld device;

maintaining a gesture mapping database comprising a mapping of each of the remote command gestures to an associated command for controlling operation of the  
10 remote device;

tracking movement of the handheld device in relation to the viewable surface;

comparing the tracked movement against the remote command gestures to determine a matching gesture;

identifying the one of the commands corresponding to the matching gesture;

15 and

transmitting the identified command to a remote receiver for delivery to the remote device.

15. The logic of Claim 14, wherein the remote receiver comprises a  
20 wireless interface of the remote device.

16. The logic of Claim 14, wherein the remote receiver comprises an element of a public wireless telephone network.

25 17. The logic of Claim 14, wherein the remote device comprises audio/visual equipment.

18. The logic of Claim 17, wherein the identified command controls output of the audio/visual equipment.

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19. The logic of Claim 14, wherein the gesture database further defines each of the remote command gestures using a sequence of accelerations; the logic further operable when executed to perform the steps of:

detecting acceleration of the handheld device along a first axis;

5 detecting acceleration of the handheld device along a second axis, the second axis perpendicular to the first axis; and

detecting acceleration of the handheld device along a third axis, the third axis perpendicular to the first axis and perpendicular to the second axis;

10 detecting motion of the device using accelerations measured by the first accelerometer, the second accelerometer, and the third accelerometer; and

matching the accelerations against gesture definitions in the gesture database to identify potential indicated ones of the remote command gestures.

20. A motion controlled handheld device comprising:

means for generating, on a viewable surface of a handheld device, an image indicating a currently controlled remote device;

5 means for maintaining a gesture database maintaining a plurality of remote command gestures, each remote command gesture defined by a motion of the device with respect to a first position of the handheld device;

means for maintaining a gesture mapping database comprising a mapping of each of the remote command gestures to an associated command for controlling operation of the remote device;

10 means for tracking movement of the handheld device in relation to the viewable surface;

means for comparing the tracked movement against the remote command gestures to determine a matching gesture;

15 means for identifying the one of the commands corresponding to the matching gesture; and

means for transmitting the identified command to a remote receiver for delivery to the remote device.